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REMARKS

This paper includes no amendments to the presently pending claims. Accordingly, remaining in the application are independent claim 1 with its dependent claims 2, 3, 9 and 25-27; independent claim 10 with its dependent claims 11, 12, 17, 19, 20, 28 and 29; and independent claim 21 with its dependent claims 23, 24, 30 and 31.

In the Specification

The Office Action indicates that the specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. More particularly, the Office Action states that the specification does not provide antecedent basis for language recited in claims 26, 29 and 31. Accordingly, the present paper includes a proposed amendment to the specification providing proper antecedent support for the claimed subject matter. The amended paragraph presents no new matter and clearly reads on the embodiment shown in the originally filed FIGURE 5.

In the Drawings

The Office Action indicates that FIGURE 5 is objected to because reference-emitting angle sigma (σ), shown in FIGURE 5, should be represented by the symbol alpha (α) as mentioned in the specification on page 6 at line 25. As such, included in the appendix hereto is a proposed replacement drawing sheet for review by the examiner and an annotated drawing sheet showing the changes made.

Additionally, the proposed changes to FIGURE 5 also include the addition of item numbers 102, 102A, 102B, 120A and 120B. These item numbers correspond to the present amendments to the specification. No new matter has been presented.

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Rejections Based on the Art

The Office Action states that the pending claims are rejected under 35 U.S.C. §103(a) as being obvious and, therefore, unpatentable over Bockley in view of Kosmatka, Arlt and in further view of Fontana. After careful consideration of the present and earlier Office Actions, and after a detailed review of the cited references, Applicants respectfully submit that the examiner has failed to make a prima facie case of obviousness for at least the following reasons:

Non-Analogous Art

As the examiner knows, references that are not in an art analogous to that of the invention cannot be used or relied upon in forming a rejection of the claimed invention. Art that is not in the inventors' field of endeavor or is otherwise not reasonably pertinent to the specific problem in which the inventor is involved is not considered analogous art. In re Antle, 170 USPQ 285, 287-8 (CCPA 1971).

Applicants respectfully submit that Arlt, which is cited by the examiner in rejecting the presently pending claims, is not analogous art because the subject matter of the reference is not in the field of the inventors' endeavor nor is it reasonably pertinent to the specific problem in which the inventors were involved. Arlt discloses a metal-halide high-pressure arc discharge lamp. The present invention is directed to incandescent lamps. It is well understood that incandescent lamps operate on significantly different principles and at significantly different temperatures and wavelengths than arc discharge lamps. What's more, the operation and characteristics of arc discharge and incandescent lamps are not readily transferable to one another. As such, while both types of lamp are broadly considered light sources, these two different types of lamps are not generally considered to be within the same field. For example, solutions to problems associated with one type of lamp are not readily found in developments related to the other type of lamp.

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Furthermore, one aspect of the present invention includes the provision of a totally reflecting coating disposed on the envelope. The totally reflecting coating acts to reflect infrared and visible radiation back into the envelope that would otherwise escape through the ends of the ellipsoidal portion of the same, thus improving the efficacy of the lamp during steady state operation. Arlt is directed to an arrangement that acts as a heat trap to reduce the startup time of the lamp. The arrangement in Arlt has no impact on steady state operation of the lamp. As such, the disclosure of Arlt is not reasonably pertinent to the specific problem in which the inventors were involved. For at least the foregoing reasons, Arlt is not in an analogous art to that of the present invention and cannot properly be used in formulating the rejection in the outstanding Office Action.

No Suggestion to Combine

Additionally, there is no readily apparent reason, suggestion or motivation from the cited prior art for one skilled in the art to have combined or modified the cited references as provided in the Office Action. As the examiner knows, there are three possible sources for a motivation to combine references: the nature of problem to be solved, the teachings of the prior art and the knowledge of persons of ordinary skill in the art. MPEP §2143.01 citing In re Rouffet, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998).

The problems and disadvantages associated with halogen lamps are set out in detail in the present application and include infrared radiation leakage and reduced efficacy during steady state operation of lamps. As mentioned above, the lamp of Arlt was developed to have an improved or reduced startup time, as stated in column 1 beginning at line 25. The nature of the problem to be solved by Arlt, namely improved starting time of the lamp, does not provide the reason, suggestion or motivation to combine the cited references. That is, the lamp construction disclosed in Arlt was not developed to overcome problems and disadvantages such as those of the present application with regard to halogen lamps.

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Additionally, the Office Action states that the other cited references do not teach a totally reflecting coating disposed on both ends of the lamp envelope, and especially a coating subtending an angle from 22 degrees to 45 degrees. The cited references provide full solutions to the problems and disadvantages recited therein, and therefore provide no readily apparent suggestion or motivation for looking to another reference to make the present combination. As such, the reason, suggestion or motivation to have combined or modified the cited references is not provided by the prior art.

So, as the examiner knows, where the incentive to combine the teachings of the references is not readily apparent, it is the duty of the examiner to explain why the combination of the reference teachings is proper. Absent such reasons or incentives, the teachings of the references are not combinable. Ex parte Skinner, 2 USPQ2d 1788, 1790 (Board of Pat. App. and Inter. 1987). In the present case, the examiner has not provided any such reason, suggestion, or motivation. The examiner's sole explanation or reasoning for making the proposed combination is, as recited in the Office Action, the conclusory statement that "it would have been obvious" to make such a combination. The examiner is apparently suggesting that the source for the motivation to combine is the knowledge of one skilled in the art. However, the mere fact that the references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. (Emphasis original) MPEP §2143.01 citing In re Mills, 16 USPQ2d 1430 (Fed. Cir. 1990). Here, the incentive to combine these teachings is lacking, and the examiner has given no explanation as to why the combination is proper.

Importantly, the absence of such reason, suggestion, or motivation creates the presumption that the examiner is using impermissible hindsight. The Federal Circuit has stated that "[b]ecause the Board did not explain the specific understanding or principle within the knowledge of a skilled artisan that would motivate one with no knowledge of Rouffet's [the subject] invention to make the combination, this court infers that the examiner selected these

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references with the assistance of hindsight." In re Rouffet, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998). As such, having provided no substantive explanation, the examiner must be presumed to be impermissibly using the claimed invention as an instruction manual or template to piece together the teachings of the prior art to formulate the present obviousness rejection. In re Fritch, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

No Reasonable Expectation of Success

Furthermore, it is not enough for the prior art to suggest the combination recited in the claims. There must also be some reasonable expectation of success for the suggested combination. As such, even if the above combination of references was proper, which it is not, one skilled in the art would not have had any reasonable expectation of success in making the combination recited in the Office Action. In re Vaack, 20 USPQ2d 1438 (Fed. Cir. 1991).

As discussed above, the coating in Arlt is utilized to trap heat, which decreases the warm-up time of the lamp. The coating is formed from silicon iron oxide and zirconium oxide, and is used to heat the "space behind the electrode," as indicated in column 3 at lines 28-37. Such materials are not generally known to be highly reflective as desired in the present application, which prefers materials such as silver, aluminum or other highly reflective materials. The different physical characteristics of these materials, when taken in combination with the significant differences between incandescent and metal-halide high-pressure discharge lamps and the effects such coatings have on the operation thereof, one skilled in the art would not have any reasonable expectation of successfully combining the cited references to obtain the present invention.

CONCLUSION

It is respectfully submitted that the foregoing amendments and discussion are fully responsive to the latest Office Action, that the specification and drawings are in proper form, and

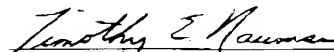
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that the claims patentably distinguish over the art of record for the reasons stated. Having addressed all of the outstanding objections and/or rejections, the subject application is now believed to be in condition for allowance. Reconsideration of the claims and early notice of allowability is earnestly solicited.

Alternatively, in the interests of compact prosecution and advancing this application to issue, Applicants respectfully request that the examiner telephone the undersigned to discuss any of the foregoing with which there may be some controversy or confusion and/or to make any suggestions that the examiner may have to place the case in condition for allowance.

Respectfully submitted,

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